

**Client Contact:**

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Inc.  
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**Services Provided:**

- **Concrete Pavement  
Core Examination and  
Testing Findings and  
Conclusions**

**Project Summary:**

Cesare, Inc. (Cesare) performed a study of 11 core specimens from the Wyoming Air National Guard facility in Cheyenne, Wyoming. The study resulted in the conclusion that the in-place pavement was a candidate for either a concrete pavement overlay or to be left intact and monitored yearly for five years. Three locations were found to need surface repair prior to a bonded overlay of concrete. A risk of alkali silica reactivity (ASR) was found, but due to the current condition of the pavement after 66 years of service, the associated risk was minimal. Milling operations could remove any of the surface cracking characteristics observed. Compressive and splitting tensile strength testing was performed on the cores. Cesare recommended

a 5 inch mill and bonded concrete overlay in conjunction with repairs. Cesare gave recommendations for the milling operations, specific to the concrete at the site. It was necessary for overlay material to be dense, relatively impermeable, and resistant to environmental effects and chemical reactions. The bond agent was recommended to be comprised of low alkali cement and water at no greater than a 0.62 water to cement (W/C) ratio.

